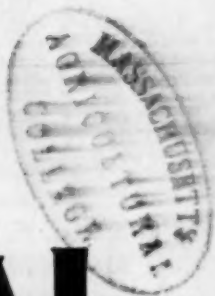


Let every bee-keeper in the United States write to his Senator in Washington, D.C., urging him to **call up** and **vote for** the **NATIONAL PURE FOOD BILL** that has already been approved by the House of Representatives. **Do it NOW.**

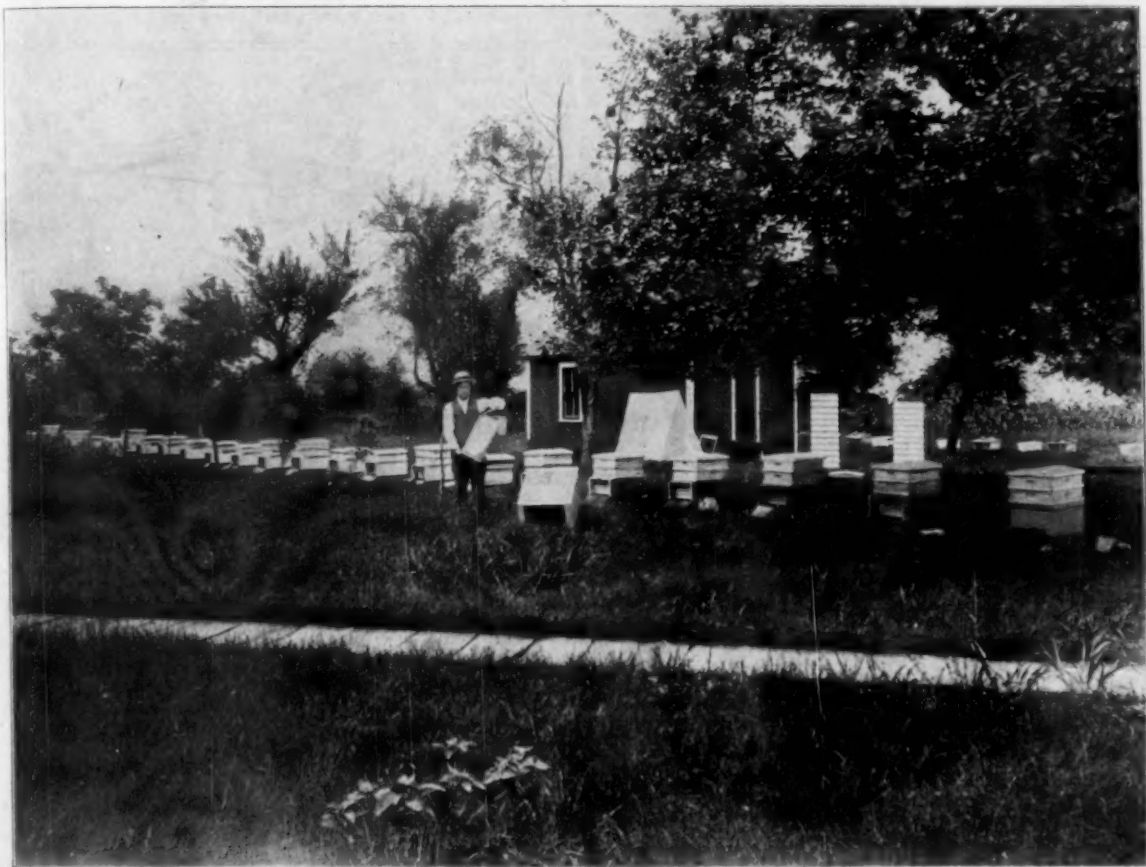
AMERICAN BEE JOURNAL



43d Year.

CHICAGO, ILL., JAN. 29, 1903.

No. 5.



APIARY OF V. H. FISHER, OF GRUNDY CO., ILL.
(See page 68.)



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EDITOR,

GEORGE W. YORK.

DEPT. EDITORS,

DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is \$1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for \$1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with \$3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for \$1.90.

GEORGE W. YORK & CO.**Chicago, Ill.**

Please allow about two weeks for your knife order to be filled.



An Italian Queen Free

—IN MAY, 1903—

To Regular Paid-in-Advance Subscribers Only.

We wish to make a liberal offer to those of our regular readers whose subscriptions are paid in advance. It is this: We will send you FREE by mail, in May, 1903, an Untested Italian Queen for sending us \$1.00 and the name and address of a NEW subscriber to the American Bee Journal for a year. This is indeed a big premium, as the queen alone would cost you 75c.

We are booking orders for Queens now for next May delivery. Will you have one or more? This offer ought to bring in many orders. Our queens are reared by the best queen-breeders, and give satisfaction.

Address,

George W. York & Co., 144 East Erie St., Chicago, Ill.

ESTABLISHED IN 1861 AMERICAN THE OLDEST BEE-PAPER IN AMERICA BEE JOURNAL

43d YEAR.

CHICAGO, ILL., JAN. 29, 1903.

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* Editorial. *

Honey for Tired Eyes.—It is said that when the eyes are tired from long study and reading, a little honey rubbed on the lids at night will relieve them. Easy enough for bee-keepers to try, if they ever have the tired eyes.

Shipping and Grading Comb Honey.—This is a subject that we have written on several times during the past few years, and, judging from our annual experience we ought to write on it every time the season comes around for handling comb honey.

Recently we purchased a lot of honey from an Iowa bee-keeper. He did not ask us how we wanted it packed for shipping, nor did we volunteer the information, thinking that of course he knew how to do it all right.

There were over 40 twenty-four-section cases in the lot, and, would you believe it? They were shipped *singly*, instead of being packed six or eight cases in a crate, with straw under them, and the crate with two handles at each end.

And what of the result? There were just seven cases of it entirely broken out of the sections, and some more combs cracked more or less. What a pity, to produce comb honey, and then through inexcusable carelessness or ignorance ship it in a way that must inevitably result in a loss, besides a miserable, sticky mess to clean up, as it all had to be handled over section by section, wiped off, the cases washed out, and the honey put back into them, after sorting the broken from the whole combs.

Now, as to the grading: There wasn't any attempt at this. There was No. 1 white, amber, buckwheat, and granulated, all mixed in a case! Out of some 40 cases there were eighteen of amber and buckwheat, one of granulated, two of culls, and the balance No. 1 white. Had this lot of honey been shipped to some commission men, they would likely have paid about 8 cents a pound for the lot, calling it all amber and broken. They would not, in all probability, have gone to the extra work of sorting out the various grades, separated the broken combs, and cleaned up the dauby mess.

We hope this experience will not only teach a lesson to the particular snipper who sent this lot of honey to us, but our description of it should serve as a warning to all our readers who produce and ship honey, to prepare it

properly for safe transportation on the railroad.

About the same time we received a shipment of nice, white comb honey from Wisconsin, which was prepared properly, with shavings in the bottom of the crate, and not a comb was broken down. It was also properly graded. There was a great contrast between the last shipment and the first one referred to. It was a pleasure to handle the Wisconsin lot, while the Iowa shipment was discouraging all the way around—undoubtedly to the shipper as well as to us.

Simmins' Forced Swarms.—All the time there is coming to light fresh evidence that forced swarms have been made by many who have said nothing about it, and there are not wanting cases in which publicity has been given to the practice, but for some reason less attention was formerly given than lately to the matter, and so a repetition of things said years ago will now be timely. A letter from the well-known English authority, Samuel Simmins, calls attention not only to the method of forced swarms, published by him many years ago, but to a material difference in details which is worthy of serious consideration. Mr. Simmins says:

FORCED SWARMS.

Did you ever read my "Non-Swarming Pamphlet," published in 1886? If so, you will see how forced—then called artificial—swarms were to be hived on starters in preference to full sheets of foundation, with this very important difference:

"All the bees were taken from one colony, half the bees from another. The latter had all the spare combs—hence, still two powerful colonies and no increase."

Now, why do you make two weak colonies out of one strong one, as you are all doing? Is that progress? Will that give you the highest results? Certainly it will not.

In my own case I was obliged to add one or two combs of brood, principally because the bees having nowhere to place the incoming pollen, would take it into the sections. After that there was no trouble in that direction.

Here is an extract from my "Non-Swarming Pamphlet," 1886, page 29, chapter on "How to Control Swarming:"

"When....the honey-flow has commenced, select any two strong colonies.....no matter how far apart; remove from one all the brood-combs but two left in the center.....and fill up with three frames having guides only on either side. Now return all the bees by shaking and brushing from the combs; and also one-half of those bees from the second colony.....Then put on supers of a capacity of not less than 40 pounds at one time, with all sections filled with [drawn] combs."

The brood-combs removed were given to the other hive deprived of part of its population and this afterwards supered for either extracting or comb, and, with so many combs, this colony gives up all thought of swarming, though presently having an immense population.

SAMUEL SIMMINS.

The Future of Alfalfa, so far as it relates to bee-keeping, is a matter of interest to Western bee-keepers. While some feel no anxiety in the matter, others feel that the doom of alfalfa as a honey-plant is not many years in the future. The whole matter hinges chiefly on the time of cutting alfalfa for hay. It is maintained by some that for best results alfalfa should always be left standing till at least well advanced in bloom, while others maintain that it must be cut much earlier. The conclusions of the experiment stations as to this are not reassuring. Those of Colorado, Kansas, and Utah, are agreed that alfalfa must be cut when first coming into bloom—say when one-tenth is in bloom—in order to get the largest amount of protein—that part which is absolutely necessary in order to form blood and muscle. When the cutting is delayed till the plants are half in bloom, there is a falling off in protein, and a still greater falling off when in full bloom.

Even if all should agree that for best results alfalfa should be cut when not more than one-tenth in bloom, the plant will, no doubt, continue to be an important factor in bee-keeping. That tenth will mean a good many tons of honey. Then there will always be a liability to delay. Where a very large surface is to be cut it will not be possible to cut all in one day, if indeed in a goodly number of days, and every day's delay will mean just so much addition to the larder of the bees. A considerable acreage will be used as pasture, giving a continuous yield, and always there will be a considerable amount allowed to go through its full season of bloom for the purpose of maturing seed.

So at the worst there will still be no little for the bees, and with the usual hopefulness of bee-keepers the producers of alfalfa honey will keep right on gathering in their precious harvest until the time of failure comes—if it ever comes.

The Value of Foods.—The following clipping from that important English periodical, Chambers' Journal, has been sent by a Canadian physician, Dr. W. O. Eastwood:

We once heard an intelligent child complain that "all the nicest things to eat seem to be unwholesome." If that child, now of larger growth, should happen to alight upon the report of a lecture delivered lately before the South-West London Medical Society, by Dr. Robert Hutchinson, he will rejoice greatly, for the lecturer demonstrated that many nice things have a very great dietetic value. He condemned many of the much-belauded patent foods, and showed that, upon analysis, they compared very unfavorably with meat, eggs, milk, and sugar. "A pound of honey at ninepence," he said, "is a better source of sugar than a pound of malt extract at three shillings." And, speaking of cod-liver oil as a means of administering fat, he

remarked: "In cream you get a more valuable substance, because ordinary cream contains more than 50 percent of fat, and butter fat is as easily digested and absorbed as the fat of cod-liver oil, besides being much more palatable and considerably cheaper."

The lecturer also spoke highly of the value of chocolate and Everton coffee, because in both you get a combination of fat and sugar without water. Unfortunately it is difficult to make people believe in the great value of a diet within their reach. They will turn away from such commonplace things as milk and eggs, and go to any amount of trouble to procure costly preparations having only a tithe of their value as food. The lecturer's good opinion of cream, honey, chocolate, and coffee will be received with enthusiasm by the rising generation, if not by their elders.

It is gratifying to see that the medical profession are assigning to honey the important place it once occupied as an article of food and medicine. It certainly does not seem that the inclination to gag on the part of the patient aids in the assimilation of cod-liver oil, and if something at less cost can be substituted for it, at the same time substituting a pleasurable sensation for the gagging, common-sense would approve the substitution.

And the same common-sense would approve the substitution of honey for malt extract, however highly the latter may be esteemed, if the honey "is a better source of sugar" at one-fourth the cost.

May the tribe of Dr. Hutchinson increase!

Weekly Budget.

MR. MORLEY PETTIT, who was present at the Chicago-Northwestern convention, has begun a report of that convention in the Canadian Bee Journal, which shows that Mr. Pettit has his observer and his condenser both in good working order.

THE DEATH OF RAMBLER—John H. Martin. —The following we take from Gleanings in Bee-Culture for Jan. 15:

THE RAMBLER SICK IN CUBA.

Mr. J. H. Martin, better known as "The Rambler," has been very sick with fever; but from the last account he was on the mend. He is getting to be pretty well advanced in life, reaching 63 last December; and the last time I saw him (in California) I could see that age was beginning to tell on him. He has been working hard in Cuba, securing a crop of honey, and we trust he will now save his strength sufficiently so we shall have the opportunity to enjoy again his good-natured chats.

LATER, JAN. 13.—The sad news has just been cabled us by our Manager, Mr. de Beche, that Mr. Martin is dead. Of course, there were no particulars; but the run of the fever was evidently too much for him, and the end came all too unexpectedly.

Rambler's hosts of friends will sincerely regret to learn of his death. We hope to be

able soon to give a picture of him and some biographical notes in these columns.

THE APIARY OF V. H. FISHER appears on the first page. When sending the engraving, Jan. 17, he wrote as follows:

I started in the bee-business in 1894, with one colony, and now have nearly 50, besides having sold a number.

The picture does not show all the hives. The building is a honey-house, for storage of honey, hives, supers, extractor, tools, etc.

A folding bee-tent is also shown, piles of supers, and a solar wax-extractor near me, when I was holding a large frame of honey.

The hives are all improved 10-frame Langstroth, made by myself, as I am a carpenter by trade, and a manufacturer of hives in a small way, putting in all my spare time in winter and rainy days in the shop making them.

I have a 3-horse-power gasoline engine sawing machine, and other wood-working machinery in the shop. I make an improved gable cover for hives, which is first-class. If kept thoroughly painted on both sides it does not warp, check, or leak.

The latter part of the past season was first-class for honey (too wet early); I had supers fairly well filled that were put on Sept. 13 and 14. This was eight or ten days later than I have ever put on supers, and the sections were filled. I obtained about a ton and a half of comb and extracted honey from 30 colonies, spring count.

The prospects seem good for the coming season, as the bees went into winter quarters in good shape, with plenty of stores. Everything points to early swarms.

V. H. FISHER.

Convention Proceedings.

Report of the Ontario Bee-Keepers' Convention,
Held at Barre, Ont., Canada, Dec. 16, 17
and 18, 1902.

REPORTED BY MORLEY PETTIT.

(Continued from page 54.)

WEDNESDAY—MORNING SESSION.

PRODUCTION AND MARKETING OF EXTRACTED HONEY.

The subject assigned me by the committee is not one which I would have chosen, but as so much has been said in the past, and that by men of wider experience and a more thorough knowledge of the business, it might not be amiss for me to touch on some points which might raise a discussion, and in that way be of more service than would a lengthy essay, no matter how well put together.

First, in the production of honey, it is conceded we must have the bees to start with. Then we must have the man, and as neither one can produce extracted honey without the other, I would say the man is of far more importance than the bees. A first-class man will do far more with an apiary of inferior bees than could a useless man with the same number of colonies of the best strain of bees; and both together can not produce honey if there is no nectar to be gathered, as many of us have found to our disappointment. Granted all these conditions are favorable, what then?

First, we should aim to produce an article which will sell itself, if possible to do so.

Second, produce as much of it as possible. Quality first, quantity second, every time. What is "quality?" Flavor first, always; then body and color, or color and body, as

circumstances require. This for the home market. For shipping purposes I would put color first in quality, flavor second, and body third. Why the difference? For shipping purposes honey must be attractive and catch the eye, and there is a pretty general idea abroad that lightness in color is a sure indication of superior quality, and we must please the eye. Now, if we can combine the richest flavor and firmest body with the lightest color—almost or quite water-white, if you wish—we will have the ideal honey. In actual practice, how many get that? You who have been selling honey of different shades direct to consumers may answer that question. Why should not a fine-flavored honey, which is a rich straw-color, or an amber color, stand ahead of a water-white which is lacking in flavor?

Question: How can we secure the highest flavor with the lightest-colored honey every time? Localities differ. Seasons differ in the same locality, and so does the flora in the same locality. Pure clover honey differs in shade in the same locality in different years, and so does it differ in different localities in the same year. Why is this? How should such honey be graded? I would say flavor should stand first. Allowing honey to be well ripened in the hive gives a finer, firmer body. Does it give a richer flavor? I think it does.

Second, the marketing. This is a matter needing our most careful attention. If it is the home market, just show the would-be purchaser some of that first-class honey, and it is sold—at least as much of it as they need for the present. A word of caution here: Don't sell too much honey in one house at one time. Let them clean up their dishes every few weeks. A jar of granulated honey on the top shelf of the pantry is not likely to help sell a very fine liquid article which comes to the door. Better let them want honey a few days. Supply a good article at a fair price, and you are tolerably sure of your customers, unless you keep them waiting too long.

Is the honey to be shipped and sold to strangers? Well, I give it up. There are commission men—good men and true, at least some of them—perhaps they don't know much about handling honey. Then there are men who are wanting to buy all the honey in sight, but are not prepared to pay much—there has been such an enormous crop. Ar they any help in marketing our honey? Then there ar

some who might purchase a quantity at wholesale and pay a fair price, but who will bring the producer and dealer together? What about that honey exchange?

J. K. DARLING.

The discussion was at first on the amount of honey which should be sold to one private customer. The conclusion was that to new customers we should not sell large quantities, but an old customer knows what he wants.

With reference to candied honey, if we sell the honey liquid we should explain to the customer that it will granulate, and tell him to put it in sealers from which he can dig it out and use without melting it up.

Mr. Holtermann described a novel way of selling granulated honey. A barrel of honey is set up in a grocer's window, and the barrel taken off, leaving the barrel-shaped cake of honey. One grocer, last winter, sold three 600-pound barrels in this way after Christmas, and this fall gave an order for five barrels "as a starter." The honey is cut off the barrel with a wire, as cheese is cut, and wrapped in paper by the pound, or in any quantity the customer desires. This makes a splendid advertisement. It becomes the talk of the town.

This idea met with much opposition. The paper would taint the honey, the honey would collect dust and flies, it would absorb moisture and melt down, etc.; but Mr. Holtermann said that the proof is that it has been tried and has worked.

Mr. Dickenson—I like honey best candied, and my family does, too.

Mr. Brown—Bottled honey sells best liquid.

Mr. Sibbald—We frequently have bottled honey sent back because it has granulated.

Referring to Mr. Darling's paper, quality is most important. Many bee-keepers send out poor honey, even honey that will ferment. This hurts our business more than anything else.

Mr. Newton—We are not making much impression on people trying to teach them to use candied honey. They prefer the looks of it liquid.

Mr. Pettit—The trouble is, when we sell people liquid honey, and it candies on their hands, they say it has all "gone to sugar." Better sell it in its natural state, and put on a label with directions for liquefying.

Mr. Holmes—The barrel is a good thing if practical. Yet it is at variance with the modern tendency toward small packages.

Mr. Byer—We must use our judgment as to the trade. If put up in glass it must be liquid, yet we should further the sale of granulated honey as much as possible. For the home trade I use 5-pound and 10-pound pails, labeled with directions for liquefying.

Mr. Miller—Honey granulated in 5-pound slip-cover pails is clean to handle; if a customer tips a pail it does not drip, and it is always ready for sale.

Mr. Couse—If a man orders a quantity of honey I do not let him have it all at once. I can care for it better than he can, and take it to him liquefied just as he needs it. If the honey always goes out in good shape a great deal more can be sold.

Mr. Whitesides—We should get the honey into the hands of the poor as cheaply as possible. Selling in paper, or in lard or butter trays, tends in this direction. If honey is sold liquid it requires to be liquefied so often, and where it is in bottles this is difficult. It may be done by setting the bottles in a room kept at a temperature of 140 degrees, Fahr.

Mr. Morrison prefers a small tin package.

Prof. Shutt—We have learned that honey is very absorptive. In a dry atmosphere Mr. Holtermann's barrel might be all right, but in a damp climate it would accumulate moisture.

Mr. Holtermann—In a small city a barrel will be sold in ten days, so it has not much time to accumulate moisture.

Mr. Evans—Small barrels might be used for a smaller trade.

CLIPPING QUEENS' WINGS.

"How do you clip queens' wings?"

Mr. Miller—Set the comb on end, then follow her with the thumb and finger until you can grasp her shoulders. Then clip with a small pair of scissors, either on the comb or in the hand.

MOST PROFITABLE MANAGEMENT OF BEES.

"How would you manage bees to get the most money with the least labor?"

Mr. Miller—This is a big question. Roughly speaking,

it is by out-apiaries, short cuts, and learning to get along with little skilled labor outside of your own.

SPRING PROTECTION OF BEES.

"What do you advise for spring protection of cellar-wintered bees?"

Mr. Miller—Reduce the entrance, and have good top packing.

Mr. Fixter—Set the bees in a place sheltered from cold winds.

THE BEST CLOVER.

"What is the best clover for both bees and farmers?"

Mr. Miller—Alsike clover.

Mr. Fixter—Alfalfa and sainfoin give more honey. Sainfoin is not so woody, and is cut later. It is also a better fertilizer. It gives a second crop, as alsike does not.

The general opinion was that alfalfa does not yield honey here, the climate being too dry.

MANAGING OUT-APIARIES.

"In managing out-apiaries, would you have a full outfit at each yard?"

Mr. Miller—Yes, and haul the honey home as soon as possible after the extracting is done.

SIZE OF BROOD-CHAMBER.

"Is 2000 cubic inches sufficient capacity for a brood-chamber to suppress swarming?"

Mr. Miller—We need a large brood-chamber.

Mr. McEvoy—Yes, the brood-chamber should not be too large.

Mr. Holtermann—The Dadants have used large hives successfully for 15 or 20 years. If you are a good bee-keeper you can get a 12-frame Langstroth filled with brood. The shorter the flow the more bees you want, and the less you want them to divide up by swarming.

C. W. Post—If you have a large hive you can reduce it when necessary.

Mr. Dickenson prefers a smaller hive for a short flow.

Mr. Heise—With a hive holding 10 frames 11 inches deep, and an exclusive clover flow, averaged 133 pounds per colony.

Mr. Chrysler—A good queen can fill a large hive with brood in fruit-bloom.

QUEEN-EXCLUDERS.

"Would you advise an all-metal or slatted queen-excluder?"

Mr. Armstrong—The Heddon excluder made with strips of wood and perforated metal is the best, but it is difficult to make. The all-metal excluder does not clog up so quickly with propolis.

Mr. Sparling has some excluders with 2-inch strips across the middle, which seem to work just as well as the all-metal.

DEPTH OF FRAME—PROSPECTS FOR 1903.

"Would you use a deeper frame than the Langstroth?"

Mr. Heise—I use a frame 11 inches deep.

Mr. Holtermann—It is best to keep to the standard.

"What are the prospects for next year's honey crop?"

Mr. Armstrong—They never were better. There is the most clover we ever had. If the alsike does not heave, and we have a good fall set, we may be sure of a good crop next year. I speak particularly for heavy clay land.

RETURNING SWARMS TO PARENT COLONY.

"Is it a good plan to return swarms to the parent hive after two days?"

Mr. Armstrong—No, they would be out that day or the next.

Mr. Darling—If it is a second swarm cut out the queen-cells and return them at once. In cutting the cells liberate on the combs all the queens which are ready to hatch, and run the swarm in at the entrance. If you happen to miss any cells they will swarm again; but these free virgin queens are different, and they insure the colony against accident to the queen which is out with the swarm.

CELLAR-WINTERING OF BEES.

Mr. Dickenson blocks each hive up from the bottom-board on four blocks, and tiers them up three high. Wintering is a matter of temperature, dampness cuts no figure. He runs his bees in on a truck; can put in 150 colonies in four hours. The bees are all right if they are quiet.

Mr. Brown lives near Ottawa. He wants to get his bees in Nov. 10 to 15, a day or so after a good flight. He re-

moves the wooden cover and leaves only the propolis quilt on all except the top hive in the pile, on which he leaves the cover. He is not particular, but blocks up the hives where convenient. He has less than 3 percent dead in the spring when carrying them out. Temperature 40 to 45 degrees, Fahr. A ventilating stove-pipe runs from the floor up to the pipe of a stove in the drawing-room overhead. He finds the 10-frame Gallup winters better than Langstroth hives.

Mr. Holmes—Change the propolis cloth for a cotton and sawdust cushion.

Mr. Miller—I would do away with the blocking by leaving off the bottom-board and piling one hive across two.

Mr. Fixter—Mr. Pettit's plan works perfectly. Pile the hives on a bench which is higher at the back than at the front. Block up the back of the hive from the bottom-board with $\frac{3}{8}$ -inch blocks. Put on a chaff cushion to keep the top of the hive warm, so the moisture will not condense and run down on the cluster.

HOW TO EAT HONEY.

"How would you eat bread with honey on it if you have a large mustache?"

Mr. Armstrong—Perhaps Mr. Newton can tell.

The opinion of the meeting was that you should have Canadian honey of good flavor and body, then either turn the bread upside down or else stand on your head!

AN ADDRESS ON "PROGRESS."

Prof. Creelman, B. S. A., Superintendent of Farmers' Institutes for Ontario, gave a stirring address on the subject of Progress, at the second afternoon session. The object of these associations is to give information, and people are anxious for it. Twenty thousand persons attended the Winter Show at Guelph last week. A lecture room seating 600 was not able to accommodate one quarter the people who sought admittance. Here lectures were delivered at all hours of the day by men competent to speak on all branches of farming. Farmers were asking questions about bacon, poultry, beef, cheese. There is coming to be as great a demand for information about honey. All these other industries were but a short time ago in their infancy. When they began to boom, people feared over-production, but the demand has increased with the supply. A few years ago Canadian pork could not compete with Irish or Danish pork, but Canadians combined and forced in a good article. Jno. Bull is conservative, yet when he got a taste of Canadian "pea-fed" bacon his appetite for it increased at the rate of one million dollars' worth per year. We supply 70 percent of the cheese on the English market. Twenty-five million dollars is spent by England for Canadian cheese, and it comes mostly from Ontario.

Now give them a taste of Canadian honey; always send a good article, and there is no chance of over-doing the honey-business. In going from Liverpool to London you pass through large cities whose names you have never heard. All manufacturing cities produce not one pound of food, but all require to be fed from outside the country. Let the bee-men of Ontario get into line with the fruit-men and poultry-men, and create a more lively interest in the industry and the Association.

Prof. Creelman advocated a closer relation with the Department of Agriculture. He suggested an affiliation with the Fruit-Growers' Association. As we also have some common interests we could meet at the same time and place, and so get reduced railroad rates; advertise together; have joint evening sessions, etc. At the Fruit-Growers' convention each director was asked to bring in a written report of what they had done to advance the interests of the association during the year. The directors take pride in this sort of thing. If not, they are not elected next year. The Department of Agriculture is ready to do what they can to help every association as soon as they see good use is being made of the money.

With regard to selling honey, we must create a demand. Keep the papers full of it. Keep store windows full of it. Get people to eating honey instead of the adulterated jams, marmalades, etc.

The following is the

REPORT OF THE INSPECTOR OF APIARIES.

During the season of 1902 I visited bee-yards in the counties of Huron, Middlesex, Perth, Brant, Wentworth, Lincoln, Welland, Halton, York, Cardwell, Grey, and Simcoe. I inspected 91 apiaries, and found foul brood in 30 of them, and dead brood of other kinds in many others which had been mistaken for foul brood. I also found several fine

apiaries completely cured of foul brood that had been reported to be diseased.

The frequent showers that we had in the early and middle part of the past honey season kept the bees in their hives for hours at a time, and this taking place when the bees had a very large quantity of larvæ to feed, caused a rapid using up of the stores, and as fast as the cells were emptied the queens layed in them, and soon after that all brood-chambers became full of brood, and as they were left in that condition, with the bees being driven in from time to time by the rains, which were followed by sudden warm spells, brought on the greatest rage of swarming ever known in the Province of Ontario, and created a great demand for comb foundation, and some bee-keepers not having any on hand, and not expecting to get any very soon, used some old combs (that were saved from colonies that had died from disease), and spread the genuine article—a thing the same parties will never do again.

All old, diseased combs should be melted and put through a wax-press, as that is the only kind of an extractor that will take all the wax out of old combs.

It would greatly improve the apiaries in many localities if their owners would use more foundation, and melt a part of their old combs each year until they were all renewed.

While on my rounds through the Province I was much pleased with the very generous treatment that I received from every bee-keeper.

WM. McEVVOY.

(Concluded next week.)

Contributed Articles.

Heredity in Bees—Further Explanations.

BY L. STACHELHAUSEN.

ON page 422 (1902) I wrote a short article in which I tried to explain the way the worker-bees can transmit to their offspring their own qualities. Prof. A. J. Cook honored me by considering this article, and wrote an answer to it on page 567. Probably I did not express my ideas plain enough, because Prof. Cook speaks of the evolution in bees, and says:

"In all organisms parents...are ever producing offspring varying from each other.... Thus while all parents tend surely to transmit their own peculiarities to their progeny, there is always as surely a like tendency to variation."

In all this I fully agree with Prof. Cook, but in my article I did not intend to write about evolution of the bees, or the possibility of variation, but to consider the transmission of all regular characteristics, form and power of organs, and other peculiarities of the *worker-bees*, through the queen to the offspring of the *worker-bees*, while the queen and all her ancestors never possessed these peculiarities. This surely can't be called a variation, and so Prof. Cook's article does not cover the case.

We know that from an impregnated egg a queen can be reared, and this is quite in accord with other organisms, as the young queen is very like her mother (variations are possible). This needs no explanation, at least not for our purpose. Now comes the dividing point: By a certain nourishment of the young larva we get no queen, but a worker-bee from the same egg. (And under certain circumstances even animals, which are part queens and part worker-bees). These worker-bees are not variations of the queen, but the regular progeny of the queen, and quite unlike herself. The problem is to explain this, and this is entirely impossible, if we consider queen and worker-bees as independent animals.

Our theory is, that the queen is no perfect animal; her sexual organs and functions are fully developed, but all organs for nourishment are undeveloped, or entirely missing, not only the inner organs but the exterior organs of nourishment, as for honey, pollen, etc., too. The queen is not able to preserve her life without the worker-bees, not even for some hours. On the other side, in the worker-bees the sexual organs are rudimentary, but all organs for nourishment are fully developed. We say the true female animal is *queen and worker-bees combined*. With bees we have the peculiarity that the sexual organs are in a separated body, and the organs necessary for nourishment in another

separated body. The way in which they are nevertheless closely connected, I tried to explain in different articles.

Another theory is possible: We can say some ancestors of the queen had all the organs and instincts which we at present observe with the worker-bees, and the power to transmit these peculiarities remain latent in the queens, and appear regularly by a certain nourishment of the larvae. This theory is very improbable, and, if true, would make impossible any further evolution of the bees.

If we accept our theory we have no more difficulty. In the same way, as it is possible, that the egg of a mammalia inherits the disposition to develop into an animal with the same form of the head or the legs, etc., as the parents have; it is impossible, too, that the eggs produced by this combined female bee can develop into a queen or into a worker-bee (or into a drone, if not impregnated); and which one of these forms will develop depends entirely on the food given to the larvae. The food is deciding, but the disposition for these different developments must be inherited. The fact that in the female bee the sexual organs are in a body separated from the body which contains the nourishing and blood-forming organs, is a peculiarity of the bees, and does not alter the functions of the organs at all. The discovery of how these different bodies work together is one of the most important discoveries in the physiology of bees, and solves problems which were unsolvable before, and it was the purpose of my article to explain this. It is astonishing that all this is entirely ignored by the bee-keepers in the United States.

On page 568 (1902) Prof. Cook says: "This mother-queen had the power to transmit them [the good qualities of the worker-bee] else they [the young generation of worker-bees] would not possess them." Just so. But the question which I raised is: How can she transmit these qualities which she or her next ancestors never possessed?

If an Italian queen is mated to a black drone, the drones from this queen, according to parthenogenesis, will be pure Italian drones; but if our theory is correct, and the worker-bees are hybrids, these drones should show at least a small sign of black blood. Different prominent bee-keepers (among them Mr. Doolittle) are said to have observed this small amount of black blood. Some concluded, from this fact, that parthenogenesis was an error. As we had other proofs for parthenogenesis, we considered these observations as impossible, and mistakes; but if we accept our theory we have no more difficulty in explaining the fact. That the influence of black and hybrid nurse-bees is not more visible in the color of the offspring is no proof against the theory, as the power to transmit certain peculiarities may be different, so that queen and drone have more power to transmit the color.

What Prof. Cook says about the evolution of animals, especially bees, is very interesting. That a change of environment causes some variations in animals is surely true, and we see this in all our domestic animals which at present are so much different from the wild animals from which they are descendants, that we, in some cases, have to consider them as different species. Bees, too, to a certain degree change their habits. If we use very large hives, for instance, the bees will by and by lose all desire to swarm. Even here these peculiarities must be transmitted to the progeny from the worker-bees, if they should become fixed.

Another way of evolution is by acquired peculiarities. If the worker-bees of a colony should, by much stretching and using of the tongue, acquire a longer tongue, this would not help anything toward improving our bees if the worker-bees could not transmit their own peculiarities to the coming generation.

Bexar Co., Texas.

Sweet Clover—Is It a Noxious Weed?

BY C. P. DADANT.

NOTICE on page 803 (1902) that a reference is made to us in regard to what we have said about the sweet clover being easily destroyed by cattle. I wish to give the sum of my experience on the subject.

Sweet clover was introduced in this part of the country by an old friend of ours, in the fifties. This person at the same time brought the seed of dandelion. There may have been others who brought these seeds as well, but we know of these instances because our friend told us that the two plants mentioned were not in existence around here until he sent for the seed. He had sowed the sweet clover in a very steep hillside near the Mississippi river, on the com-

mons, but the place was so steep that the cattle could not get all of it, and it kept reproducing itself till my father went and gathered some of the seed for a trial of it in cultivation.

We had then a narrow strip of land fenced in by the original owner on the outside of our farm limits. This strip was three-cornered, and unpleasant to plow, and for that reason we put it to sweet clover. It remained in sweet clover probably for ten years or more. At the end of that time, a survey showed us that it was outside of our farm limits, which we did not know till then. We concluded to remove the fence to the line. This left the sweet clover exposed to all the cattle of the vicinity, as all open land was at that time.

Within two years, that sweet clover which had grown to the height of six feet or more, and had been so thick that a man could make his way through it with difficulty—that clover, I say, had all disappeared, and had given place to the blue-grass and white clover that usually cover our commons when regularly pastured. When I say it had all disappeared, I mean it in its broadest sense, for there was not a single plant left. It had been entirely destroyed by two years' pasturing that only causes the blue-grass and white clover to thrive that much better in the same spot. Of course, it was close grazing that did it. Our farmers will all remember that pasturage became very short upon the commons of Illinois just before the law was passed which forbade cattle running at large. Had this been a fat pasture, I suppose that enough of the sweet clover would have been left to keep it alive in a small way.

Now the fact I have just narrated evidences the ease with which the clover can be eradicated, and this is of some use to the bee-keeper. Many persons have accused bee-keepers of introducing a noxious weed when they sowed sweet clover in their neighborhood. But this is not a noxious weed. Although it will grow wherever other weeds will grow, it does not invade cultivated fields. It cannot invade them since it is a biennial, and therefore offers two seasons in succession for its eradication. Granting that it may come up in a field during the year, it cannot bloom the first season, and therefore the plowing of the following spring will destroy it before it has seeded itself.

Sweet clover is rank in growth, and masters the soil only in out-of-the-way places where neither stock nor cultivation interferes with it, and in those places it takes the places of much more noxious weeds than itself. It emits a sweet perfume, which is certainly preferable to the smell of the jimson-weed (*datura stramonium*), and it does not cause diseases like the ragweed which we all know is responsible, through its pollen, for the existence of hay-fever—a disease which is only known where the ragweed exists. The sweet clover not only occupies the place of the latter weed but chokes it out of existence by its most vigorous growth wherever these two weeds are left free to fight the battle of the "survival of the fittest." In addition, sweet clover is one of the greatest soil-enriching plants in existence, for its roots are long and large, and it takes most of its nourishment from the atmosphere.

Those who complain of the existence of sweet clover do not take into consideration the fact that some weeds must grow where sweet clover grows. So is it not much better, and more profitable to the community, to have a useful honey-producing, sweet-smelling, healthy and a soil-enriching plant, than the rank, ugly and unhealthy, useless ragweed?

Do not understand me as saying that sweet clover is a good pasture plant. If it is allowed to grow, it is too rank for a good pasture plant. If pastured close, it does not stand the strain. So it is only an inferior pasturage plant. But it makes good feed for stock if taken at the right time. We have a friend in the Province of Quebec—a Mr. Pelouquin—who has repeatedly told us that sweet clover proved quite a boon to them in their cold climate. When spring opens in Quebec, it takes a long time for pastures to become good. But it appears that sweet clover of the second year's growth gets to be about a foot high before any grass can be had. They then mow it and feed it to the stock. This mowing does it no harm, and they can still count upon a honey crop and quite a little feed from it even after having secured from it an early stock food-crop which nothing else would furnish.

I think the reader will agree with me that the sweet clover deserves no blame, but that, on the contrary, it should be introduced on all soils where weeds are expected to grow, even if it were not a first-class honey-producing plant.

Hancock Co., Ill.

The Nucleus Method of Rearing Queens.

BY DR. E. GALLUP.

MR. ALLEY says, "How this must surprise my friend Dr. Gallup," after saying that he worked on the plan that if a colony was deprived of its queen the bees would rear another. Yes, I was surprised that a man after having as much experience as he claims he has had, should still advocate the rearing of queens on the nucleus plan and recommend others to use it.

Farther on he says that he knows by actual experiment that just as good queens can be so reared, as can be reared by any other method ever given to the public; and I know by actual experience that they cannot be, and are not as good. I have come to the conclusion that Mr. Alley does not even know what a good queen is. I quote from Prof. Cook's Manual, pages 91 and 92:

"We should infer that the best queens would be reared in strong colonies, or at least kept in such colonies until the cells were capped. Experience also confirms this view. As quantity and quality of the food and the general activity of the bees are directly connected with the full nourishment of the queen-larvæ, and as these are only at the maximum in times of active gathering—the time when queen-rearing is naturally started by the bees—we should also conclude that queens reared at such seasons are superior."

My experience—and I have carefully observed in this connection—most emphatically sustains this view. Now, Professor, how dare you so emphatically contradict Mr. Alley, a man who according to his own statement, reared queens in nuclei before you or I knew anything about bees? Isn't that funny?

Mr. Alley says at the conclusion of his article that he will risk his reputation as a queen-breeder on the result. I cannot see for the life of me, how his reputation can be very great when by his own showing 90 percent of his 50,000 queens reared have turned out to be worth as much as so many flies. Only think, 45,000 worthless queens he must have been rearing just for fun! Isn't it astonishing, how large minds often run in similar channels? I started in and reared my first queens by tying a piece of comb with a string to the top-bar of a frame, and using a small quantity of bees, for I then supposed that a queen was a queen, no matter how she was reared; but, it did not take me 50 years to find out that queens reared in this way were worthless, and inferior in every respect, and that the plan is unnatural, unreasonable and unscientific. It is unnatural to deprive a colony of bees of their queen and compel them to rear a queen at any time, whether conditions are right or not.

Now, what are the natural conditions? The colony is strong in numbers, they are gathering abundance of stores, thus keeping up an abundance of warmth and vitality, they also have lots of nursing-bees to prepare the royal jelly, etc., all of which is lacking in the nuclei. The cells are started and the queen deposits the egg in the cell. If even after the cells are started, and all is proceeding right so far, if from any cause the supply of forage is cut off suddenly swarming is abandoned, the cells are cut down, drones are expelled, and there is no more swarming that season, even if the weather is ever so propitious, until a new crop of drones is reared. This accounts for the bees clustering outside and not swarming so many seasons in old box-hive times. How many seasons we have watched in vain for swarms, and no swarms came out. Any person, we care not who, that practices the nucleus plan of rearing all his queens, for a series of years, will find his colonies running to the lowest ebb. Any person, we care not who, that practices rearing his queens in extra-strong and populous colonies, and under the swarming impulse, will find the reverse, and he will find the first-named queens and workers short-lived and unproductive, while the last-named will be long-lived and productive, even in comparatively poor seasons. Don't expect to bring your queens up to the standard in one season.

I wish to say to A. C. F. Bartz, on page 760 (1902), please don't class me with the professional queen-breeder, as I have never reared queens for market, never have sold a single queen to my recollection, but there is probably no man living that has expended so much time and labor in experimenting with bees, on nearly all lines, purposely for my own satisfaction, and as I have been a noted and prominent writer I wished positively to know by my own experience what I was writing about, regardless of what other people said. I am keeping a few bees now on purpose for my own amusement, and for experimentation.

At the time I had such a great loss of queens, you can see all were reared on the Alley plan, that is, no queen in the hive. In losing the queens I also lost the colonies, as none of them were superseded. Why? Because the queens failed so soon and so suddenly that there was no unsealed brood or eggs for the bees to rear a queen from. When I saw the first queen crawl out of the hive, I picked her up and placed her back into the top of the hive, and she immediately crawled out at the entrance again. I then opened the hive and examined for queen-cells, and found none, and the brood all too far advanced to rear queens from. In watching closely I saw 4 other queens crawl out in the same manner, and no queen-cells and no brood to rear queens from.

Now, Mr. Alley cannot say that the loss was owing to my ignorance in introducing in those cases. I will give Mr. Alley the credit of trying to crawl out of a smaller hole than I ever attempted to crawl through. The reader will see that those queens were not introduced at all, but reared right in the hive. Don't understand me as saying that I saw all those queens crawl out in one day, or at one time, but on different times and days. The most of those that died in the winter I found either on the bottom-board or dropped by the bees in front of the hive.

I had noticed the loss of queens and colonies previous to this, but did not pay much attention to the matter. All were reared on the Alley plan of depriving a colony of their queen. But the above wholesale loss set me to studying into the matter. I have tried the plan of filling a colony full to over-flowing with young bees, brood, etc., and then taking their queen away and compelling them to rear queens. They usually rear a lot of queens and do fairly well for two seasons, but they do not begin to come up to good queens reared under the swarming impulse. In fact, as far as I have discovered, they lack the missing link. Please see Mr. Riker's article, on pages 766 and 767 (1902).

Please do not borrow any trouble about Gallup not being able to keep up his end of the row. Alley's tirade of abuse and misrepresentation harms no more than water harms a duck's back. I am just enjoying the fun, and in the meantime trying to interest the general reader. I am not, and never have written for the benefit of those that know more than I do, but for those that know less. I never claimed to know it all.

Now, let any person that wishes to improve the race of bees try the Alley plan and see for himself, if he chooses. This is a free country; but I can tell that he will make a move in the wrong direction. Then let him try the plan of rearing queens in large hives, with strong and populous colonies—the stronger the better—and see how he comes out. Let him start with the very best queen he can get in every respect, not one that has been reared on the Alley plan, for it may take three or four generations to bring them anywhere near the natural standard; then see which he will choose for profit. That is somewhat different from Alley's advice. Any one has the same privilege to go over the same ground that I went over years ago, instead of believing either Mr. Alley's or my bare statement. You can readily see Mr. Alley is seeking a free advertisement, while I have nothing to sell. The contrast between the two kinds of queens will be so great that a blind man with his eyes shut can note the difference. Orange Co., Calif.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Amount of Foundation to Use in Sections.

It is very necessary that foundation be used in sections, at least enough for a guide, so the bees will build straight. There may be a diversity of opinion as to how much is best to be used, but all, I think, will agree that at least a starter is a necessity.

Some think it cheaper to furnish just a starter, and let the bees build their own comb; while others think it best to give the bees all the advantage they can in the way of foundation by putting in full sheets.

So far as concerns getting the comb started in the middle of the section, a starter half an inch deep will answer.

Of course, this means a saving in the purchase of foundation.

There are, however, good reasons why some think it better to put in a large amount of foundation, even to filling the section full.

Where a small starter is used, there will be more or less drone-comb built, and a section containing part drone-comb does not present so good an appearance; and you know that in comb honey the matter of looks is important.

Another thing: There is generally very little drone-comb in the brood-chamber, not as much as the bees would like to have used for drone-brood, and when drone-comb is built in the sections there is much likelihood that the queen will lay in the sections unless queen-excluders are used.

Even if excluders are used, the bees will hold some of the drone-comb open for the queen to lay in, thus leaving parts of sections unfinished.

Another advantage, and at times the greatest advantage of all, is the fact that when a flood of honey comes, the bees have a greater surface to work on with full sheets, and there seems plausibility in the claim of some that more honey can be secured than by using small starters. It surely must be a saving of time for the bees.

The question for each one to decide for herself is whether the saving of cost of foundation by using small starters will be worth more or less than the advantages of full sheets.

We have decided the question, that for this "locality" we can not afford to have anything less than full sheets.

Look Out for Mice in the Bee-Cellars.

You are not forgetting those mice in the cellar, are you? If you are, you will be ready to vent your vengeance on them next spring when you see the big holes they have made in your nice combs. You would better vent it now with a little strychnine and cheese. It will be more to the point.

I think I hear some one say, "She told us that before." So I did, but if you are any like me you will need some one to tell it to you often, else you forget.

A Thermometer for the Bee-Cellar.

Have you a thermometer in your cellar? If not, you would better get one and keep it there. You can get one for 15 or 20 cents.

About 45 degrees is generally considered the best temperature for bees, but all thermometers are not alike. If you have a lot together you may find that they vary ten degrees. How are you to know which is right? Put your thermometer in your cellar, then keep close watch of your bees, and see at what temperature your bees keep the most quiet, then try to keep them at that temperature.

That is the right temperature for you. At least that is what your bees say.

Honey-Muffins.

Two eggs, 2 cupfuls flour, $\frac{3}{4}$ cupful extracted honey, $\frac{3}{4}$ cupful milk, $1\frac{1}{4}$ tablespoonfuls butter, $1\frac{1}{4}$ teaspoonfuls baking powder, $\frac{1}{2}$ teaspoonful salt.

Separate the eggs. Beat the yolks until thick, melt the butter, add it and stir in the honey, milk and salt. Sift in the flour, beating until smooth. Then fold in the whites of eggs, which have been beaten stiff. Add the baking powder at the same time. Bake in muffin-rings set on a gridle. When done, drop a bit of butter on top of each, sprinkle with pulverized sugar, and serve; or, omitting the sugar, pass extracted honey with them.

For special occasions a delicious sauce is made from honey and almonds, two tablespoonfuls of finely shredded blanched almonds being mixed in each cupful of honey.—The Delineator.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards, for such effort.

* The Afterthought. *

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

EASY FALL INTRODUCTION OF QUEENS.

Glad it was the careful Mr. Doolittle that said the usual precautions of introducing queens can be dispensed with late in the fall when brood-rearing has entirely ceased. Reasonable—but we want some good testimony in addition to sweet reasonableness when a queen's life is at stake. Just remove old one—wait two days—drop in new one. That the bees shall be quiet, and not cross at the time, is to be assumed, I suppose. Page 787.

UNTESTED AND TESTED QUEENS.

It would be nice to say, "Untested queen," "Color-tested queen," "Tested queen"—making three grades; but the breeders, or some of them, are going to hang on like a bulldog to the old established use of the term, "Tested queen." You see. Page 787.

INFORMATION ABOUT THE HONEY CROP.

So 48 out of 400 Colorado bee-keepers return a postal card sent to them with request for information about the crop. And Californians are not "sly" to give away their information to Coloradoans, and *vice versa*. Shall we scold? Or shall we smile—and say, Let's quit trying to travel on the good-nature of other people? Page 789.

OLD LOCALITIES VS. THE NEW.

Yes, many old localities must see their crops gradually decline (on the average); while on the plains, as dandelions and white clover and sweet clover, etc., come in, the change is the other way. Interesting to see that in Hall Co., Nebr., from 1860 on, bees lived six or seven years—no surplus, no swarms—but now swarms and surplus all the same as in the white man's country. Wm Stolley, page 791.

WISE BEE-KEEPERS STORE NOW.

Bees are not storing now, but wise bee-keepers are. Just so, Sister E. M. W. Page 792.

ADVANTAGE OF OBSERVATION HIVES.

Ralph D. Cleveland is right. There ought to be lots of more simple, cheap observation hives. The reasons he gives are correct—and in addition it would advertise our business and sell our honey much more than enough to pay cost. Pages 801, 805.

BALLED QUEENS.

Against Mr. Doolittle this time. Can't back him, except that possibly he may be right as to his own locality. When the bees of a newly-hived swarm ball their queen, give up to them at once—that the incident is a failure, and that the bees may as well go back to the old hive first as last—do that anyhow. This is about what my experience indicates. He says it is *exceptional* for them to ball her the second time after she has been properly released. Page 804.

WHY THE BEES ATTACKED THE HATPIN.

On the issue between Mrs. Snyder and Miss Wilson, as to why the bees attacked a black hat-pin and not the black veil where drawn over the edge of the hat, I'll venture this guess: It takes black color *plus something else* to stir the dander of bees very much. Probably the hat-pin sparkled which the veil did not. Possibly also it had a little chain, or dingle of some sort, that kept bobbing around. I have seen bees attacking the end of a stove-pipe out of which smoke was crinkle-crankling. Sparkles and quick motions much worse than any possible color. Page 609.

APIARY GARMENTS—SMOKING BEES.

Mrs. Snyder's best new idea is that a garment worn in the apiary and nowhere else will contract an odor conciliatory to the bees. Looks quite reasonable.

To smoke a colony—wait ten minutes—smoke again—wait ten minutes more—smoke again—rather expensive of precious time. But I once had a colony I so dreaded to encounter that I wouldn't have minded the time. For timid persons, just for the first time getting up spunk to handle bees, I should call it an excellent device—one of the best possible. Page 609.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Sowing Sweet Clover on Waste Land.

I want to know something about planting sweet clover. I am thinking of going into the bee-business, and if I do I will go to Butler Co., Pa. I would have two or three hundred acres of worn-out ground for pasture; briars and curly grass grow on it now. If I sow sweet clover around over the ground, would it take hold? Or what could I plant on it for pasture? OHIO.

ANSWER.—The likelihood is there is nothing better for your purpose than sweet clover. If you scatter the seed where it will be tramped in by horses or cattle it will be pretty sure to catch, no matter how hard the ground. Indeed, it seems to grow better on a hard roadside than on soft plowed ground. There is one danger, however, and that is, if stock that has learned to eat sweet clover is allowed to run on it when it is young, they may eat it down so closely as to kill it.

Pollen in Combs.

I send a piece of comb that I cut out of a brood-frame, and would like to know what is in the cells. It was gathered about the middle of June. Will the bees clean it out? If not, what can I do with it? About half of the brood-chamber cells are filled with it. MICHIGAN.

ANSWER.—I find nothing in the cells except a good supply of pollen, and that is in fine condition. If there is an unusual amount of it in the hive, you can give some of it to other colonies in the spring. In most places a pound of pollen is worth as much as a pound of honey; when scarce it may be worth a good deal more.

Sowing Sweet Clover.

1. When is the right time to plant sweet clover?
2. Does it bloom the first year?
3. What kind of land should it be sown on? I want to order a 5-pound package, and before sowing I want to know all about it.

I have 2 colonies of bees to commence with next spring. They are in box-hives, but after swarming I intend to transfer them into good hives. They are Italians. MISSOURI.

ANSWERS.—1. The seed may be sown in your vicinity, and it is well to have the ground made quite solid with a roller or otherwise. One of the most successful ways of getting a stand of sweet clover is to sow it on hard ground either fall or spring, and they have it well tramped in by live-stock.

2. It does not bloom till the second year, and dies root and branch the following winter.

3. It will not grow on solid rock nor in clear water; almost anything between these two will answer. It makes a fine growth on tough clay where nothing else cares to grow.

Average Per Colony from Linden, Etc.

1. How much can 6 good colonies store in an average year, from say 25 average-size linden trees?
2. I work in the Cleveland parks. Would the honey from park shrubbery, where there is some *Kalmia latifolia*, *rhododendrons* and *azaleas*, be injurious? OHIO.

ANSWERS.—1. I don't know. In a very good year I should think the bees would have all they could do while the yield lasted, there being four trees to each colony; and if so the amount they stored would depend on the length of the harvest and the amount of yield each day. The daily yield might be 10 pounds for as many days, making 100 pounds

per colony. But then my guess that four trees would keep a colony busy may be all wrong, and a good many years there would be nothing at all from the lindens, some years a light yield, and some years a very short yield. Possibly the average yield might be 25 or 30 pounds to the colony, but I'm ready to let some one that knows more about it prove that my estimate should be doubled—or cut in two.

2. I should not be very anxious about it.

Will August Bees be of Value in Spring?

Will worker-bees reared in August and September live through the winter? and long enough in the spring to be of any value in brood-rearing?

They had out-of-door exercise until Dec. 1, 1902; since then they have had no flight at all. It is now Dec. 28. ARKANSAS.

ANSWER.—The lease of life of a worker-bee is a very variable quantity, chiefly depending on the amount of work done. With a good fall flow, a bee born in August is likely to die before November. If there is nothing for it to do from the time of its birth till cold weather, it may live to do fair work the following spring.

McEvoy's Plan of Increase is given in the Canadian Bee Journal. His plan of putting frames of brood into extracting-supers, barred from the queen, so as to be sure of brood well fed and all sealed, is worthy of attention. He says:

Early in the honey season I lift two combs full of brood (about ready for capping) above the queen-excluders in many of my strongest colonies, and leave them there for nine days (the time it takes from the egg to the capped brood), so as to get all the brood extra-well fed and capped over. After these combs of brood have been nine days above the excluders, I collect two combs of brood from one super, two from another, and two from a third, with plenty of bees to cover them, and place these six combs of brood in an empty hive, and then give them a protected queen-cell, or a comb with eggs in from one of my best colonies, so that they can rear a queen, or cage a queen on the comb for about 24 hours, if I have one. The brood in these six combs being far advanced when it is placed in a new hive, will all be hatched out in a few days after.

I add brood to these young colonies from time to time until they are very strong in bees, and place supers on the early-made ones, and from these in fair honey seasons I get a super full of nicely capped honey.

The Premiums offered this week are well worth working for. Look at them.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of \$1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free—if you will mention it.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for \$1.50; 500 for \$2.75; 1000 for \$5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

Save Trouble

Are you one of those people who go around bothering your friends and neighbors to buy some Tea or Soap or Jewelry or something else they don't want, so that you can get up a club and get a Dinner set for a premium? If you are you can just quit right now. Send us one-quarter of the money you are trying to raise, get a better dinner set, and keep the good will of your friends.



Mydian Pattern, Semi-Porcelain Ware.

This elegant ware is made by J. & G. Meakin of Hanley, England. Each piece bears the stamp of the Royal crown and their name as a guarantee that it will not craze. The ware is thin and dainty, like French china. The shape is elegant, as shown in the cut. The decoration is a double border of scroll and flower work all under the glaze, so it is perfectly smooth to the touch and can never wear off. The color is a bluish green, something entirely new and in excellent taste. It is all of the first selection. No seconds or imperfect pieces, and is such a set as you would be lucky to get for \$15.00 in any retail store. The set contains 12 each Plate, Tea, Breakfast, Sauce and Butter Plates; 12 Cups and Saucers, 8 covered Vegetable Dishes, 12 scallop Vegetable Dishes, 1 covered Butter Dish, 2 Meat Platters, 1 Sauce Boat, 1 Sugar, 1 Creamer, 1 Bowl, 1 Pickle Dish. 100 pieces in all for only \$8.87 and if you send us \$1.38 extra we will send 12 footed Bowls for soup, mush and milk and many other uses. This would make 112 pieces for \$9.75. If you live in Michigan don't answer this ad, because we only sell to the trade in Michigan, but outside of Michigan you now have the opportunity to buy anything you want in Furniture, Carpets, Lace Curtains, Wall Paper, China, Silverware, Hardware, and house Furnishing Goods at actual Wholesale Prices. You can save 1/2 to 3/4 on all your purchases in this line. All Furniture dealers buy in Grand Rapids. Why don't you? We manufacture or import direct almost everything we sell. Free samples of carpets or wall paper sent on receipt of 10c to pay postage. Send for our 300-page illustrated catalog. We pay postage.

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"How to Make Money with Poultry and Incubators" is the title of the new 1903 Poultryman's Guide and Catalog (196 pages) of the Cyphers Incubator Co., of Buffalo, N. Y. It shows photographic views of the largest and most successful poultry plants in the United States, England, Germany, New Zealand and South America, and contains twelve special chapters, each written by an expert, treating of profitable poultry keeping in all its branches, as follows: Starting with Incubators, Handling Chicks in Brooder, Feeding Chicks, Duck Producing on Large Scale, Broiler Raising, Profitable Egg-Farming, Egg and Poultry Combination, Egg and Fruit Farming, Scratching-Shed House Plans, Incubator Cellar and Brooding House Plans, Feeding for Eggs, Standard-Bred Poultry. Most valuable book of the kind ever issued. Write to-day for free copy, asking for book No. 50. Sixty pages devoted to illustrated description of Cyphers Non-Moisture Incubators, Apartment Brooders, Poultry Foods and Clover Products.

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FROM MANY FIELDS

Encouraging Signs in California.

I have the pleasure of telling that we had about 2 1/2 inches of rain, as a God's blessing on our dry earth. Since the middle of last April we have had no rain, but we are having fine weather in Southern California. The new life of green shows everywhere, as the new hope of a good crop of everything.

At Christmas it is a beautiful sight to see the valley flowering and green, and the heads of mountains covered with snow.

This last year our honey crop was almost a failure; some got only 300 pounds from 75 colonies. My bees gave me 4 tons of honey from 200 colonies. **F. S. BUCHHEIM,**
Orange Co., Calif., Dec. 27.

Good Convention—The Exchange.

I am going to take the American Bee Journal as long as I live. It is worth more than the dollar.

We had a good convention at Barrie, and started a Honey Exchange, the Directors being as follows: H. G. Sibbald, C. W. Post, Wm. Couse, W. A. Chrysler, and John Newton. I have unlimited confidence in every one of these five men, and in the near future I expect to see them handle over 100 tons yearly, of the best quality of honey in the world.

The bee-industry of Ontario is booming, and after our Honey Exchange gets into good working order it would not surprise me very much if it would handle as much as 300 tons or more of choice honey every fall.

I canvassed every man at the convention, and got nearly every one to join the National Bee-Keepers' Association. While on my rounds through the Province I will canvass every bee-keeper to join the "Ontario Bee-Keepers' Exchange" and National Bee-Keepers' Association. **WM. McEVROY,**
Ontario, Canada, Dec. 26.

Indigo for Stings.

Mr. W. S. Harris recommends tincture of arnica and tincture of myrrh for the sting of a bee. I have used indigo, and recommended it for others, and have not known it to fail to stop the pain almost instantly. It is good for any insect poisoning. **F. M. KERR,**
Crawford Co., Ohio.

Clipping Queens with Scissors.

I am wondering very much whether our Afterthinker holds queens differently from the way I hold them when he clips with scissors. He talks (page 42) as if the queen makes it her business to keep trying all the time to push the scissors away while the clipping is going on, and the clipping is done by a quick move on the part of the bee-keeper during one of the times when, for an instant, her feet are out of the way. There is nothing of that kind in this locality. The work is deliberately done on the part of the bee-keeper, and the clipping is done when the bee-keeper sees and knows that no foot is in possible danger. He cogitates that mathematically it can't be otherwise than that I have a lot of maimed queens this minute.

Now, look here Mr. Hasty, you keep inside your own domain. You're not to make wild speculations and guesses—you're to after-think. And when you come to give a sober afterthought to the matter, you will hardly want to say that without my knowing it I have a lot of maimed queens just because you don't know how to clip with scissors.

Say, Mr. Hasty, come around with me at the time of spring overhauling, and if you can find a single queen that I have maimed by clipping, I'll—I'll—I don't know what I will do, but I believe I'd be willing to have you

To make cows pay, use Sharples Cream Separators Book Business, Dairying & Cat. 212 free. W. Chester, Pa

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	.75	\$1.40	\$3.25	\$6.00
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Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.20	2.30	5.50	10.50
Alfalfa Clover80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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The best book on strawberry growing ever written. It tells how to grow the biggest crops of big berries ever produced. The book is a treatise on Plant Physiology, and explains how to make plants bear Big Berries and Lots of Them. The only thoroughly bred scientifically-grown Strawberry Plants to be had for spring planting. One of them is worth a dozen common acerb plants. They grow BIG RED BERRIES. The book is sent free to all readers of the American Bee Journal. Send your address to

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people would say, "Page Fence costs more than others, and is worth more," than to have them say, "It isn't so good, but it costs less."

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
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1903 CATALOG READY.—If you have not received a copy annually, send us your name and address, and one will be mailed you FREE.

SPECIAL OFFERS.—On all cash orders received before April 1, 1903, we allow a discount of 2 percent.

To parties sending us an order for Supplies amounting to \$10.00 or more, at regular prices, we will make the following low rates on Journals: Gleanings in Bee Culture (semi-monthly) 50c; American Bee Journal (weekly) 70c. List of Agencies mailed on application.

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A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."



The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send \$1.20 to

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FOR HIS

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Liberal Discounts to the Trade.

Dittmer's Foundation!

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This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.

Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.

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Regulation dovetail with $\frac{3}{4}$ Warp-Proof Cover and Bottom. Costs more, but sold at same price as regular.

See special inducements in our 1903 Catalog.

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SHEEP MONEY IS GOOD MONEY If you work for me and easy to make. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars. DRAPER PUBLISHING CO., Chicago, Ill.

find a queen with all six feet gone, for the sake of having a chance to play with you for a day.

McHenry Co., Ill.

C. C. MILLER.

Report for Season of 1902.

We had a poor honey crop here last season. I had 46 colonies last spring, in good condition. I got 600 pounds of extracted honey, 1050 pounds of comb honey, and increased to 76 colonies, by natural swarming. They are all in good condition at present.

There was an abundance of white clover here last summer, but the weather was too wet and cold. I winter my bees in a cellar, under a workshop. It is 14 by 20 feet high, with good ventilation. It has a cement floor.

THEODORE REHORST.

Fond du Lac Co., Wis., Jan. 5.

Growing Ginseng.

It takes about 5 or 6 years for ginseng to mature for good, cultivated seed; then it is not full-grown, but it will do to market.

Wright Co., Minn.

F. GENT.

A Farmer Bee-Keeper.

I started in bee-keeping with a box-hive colony which a neighbor gave me 7 years ago; since that time I have been working with bees, and with the help of the "Old Reliable" I have been able to make them pay me 3 times as much, for the amount invested in them, as any other property I have.

I am a farmer, and there are lots of bees in old Franklin county, but not much interest taken. Some are in box-hives, some in logs. I love my bees. I winter them on summer stands. I had 26 colonies, all in Langstroth hives, the spring of 1902; I increased to 49, and got 1,000 pounds of honey, which I sold for 10 cents per pound.

I now go all over the country transferring in Langstroth hives; I also rear some queens from the best queens that I got from the queen-breeders.

M. H. SOSSAMANN.

Franklin Co., Ark., Dec. 28.

What is a Swarm?

There has been some controversy in the American Bee Journal in regard to "shook" or brushed swarms. Some claim they should be called brushed swarms, others "shook" swarms. I think it all depends upon whether they are shaken off the combs or brushed off. But why call them swarms? When is a colony of bees a swarm of bees? My idea heretofore has been that a colony of bees can only be call a swarm of bees when they are out of their hives and flying in the air—when they are swarming. As soon as the swarm clusters, or at least when they are hived, then they are no more a swarm, but a colony. Perhaps I am wrong, but if I am right then it is wrong to say a brushed swarm or a shook swarm. The one is a shook colony, and the other a brushed colony, and not a swarm at all.

Fulton Co., Ind.

S. MORRETT.

Cotton-Waste for Smoker-Fuel—Shade-Boards.

Seeing so much lately in the Bee Journal about shade-boards and smoker-fuel, I thought I would tell what I consider the best smoker-fuel, and my plan of making shade-boards.

I have kept bees for several years, and am now nearly 78 years old. During my time I have used all kinds of rotten wood, planer-shavings, and all kinds of old rags. In the first place, I would say that rotten corn-cobs, well dried and pulverized, are better than any rotten wood; still, I have something that beats everything else I ever tried. It is what is called "waste." It is what the engineers and firemen use to clean their engines with. When it becomes saturated with oil they throw it away. When they stop for any length of time they generally clean up. My first experience with it was about eight years ago. I took a bunch of it and put it in the smoker, and since then I don't want any rotten wood. All you have to do is to take a

which just large enough to fill the smoker, and just touch a match to it, and you are ready for business. You may set your smoker down, and when you pick it up it is all ready for business; it will not go out when once kindled, and lasts nearly half a day.

As to shade-boards, I make them with shingles and strips, say $1\frac{1}{2}$ inch, shingles only one thickness. As to size, any man can choose what suits him best. If it did not take so much time and space I would give my plan of putting them together.

Our honey crop in this part of Minnesota was not good. I commenced last spring with 60 colonies, and took about 250 pounds of comb honey. I put 91 colonies into winter quarters.

E. B. HUFFMAN.

Winona Co., Minn., Jan. 2.

Bee-Keeping in Cuba.

The Gleanings in Bee-Culture's man "Ramier," and other Americans with bees in their bonnets, have invaded the western end of our beautiful island, but I want to tell you this LaGloria Colony is rapidly branching out in the bee-industry.

We have had the preliminary meetings of bee-keepers, representing several hundred colonies of bees, looking to the formation of "The Eastern Cuba Bee-Keepers' Association." Our aim is to represent several thousand colonies of bees, and co-operate in knowledge. Then, too, we aim to join the National Bee-Keepers' Association, if permissible, and get in with the National commercial organization, if one is formed.

Our field for honey-production is good—royal and other palms, black mangroves, and many varieties of flowers through the woods. Cuba, Dec. 6. DR. E. M. DAVIDSON.

Poorest Crop in 30 years.

Our last years' honey crop was one of the poorest in my 30 years' experience in bee-keeping. Some of my colonies began to starve by Sept. 1, consequently I fed all the bees in the month of September, and hope to get them through the winter all right. Prospects for next season are very good.

Johnson Co., Kans.

M. ZAHNER.

Introducing Queens.

The past season was a very poor one here, very little comb honey.

As I have never seen it in print, I will tell the way I introduce a queen, and have never lost one by this way:

The next morning after the queen arrives I remove her from the colony I wish to introduce her, and wait until they get to the height of their excitement, as bees always are when their queen is lost. I then place two little sticks, $\frac{3}{4}$ x 1 inch thick, just far enough apart so the cage of the queen comes in will a little more than reach, and set them on top of the frames, so the queen will not be over the space between two frames; and put an empty super on the hive, put on the cover, and leave the colony entirely alone for four days, so as to give the bees plenty of time to eat the candy out and release the queen.

If the bees should happen to start queen-cells you can wait two days and cut them out, unless you want your bees to swarm.

Sometimes a queen will arrive in a feeble condition, or daubed all over, and then instead of waiting for the bees to eat out the candy I release her myself as soon as the bees are very uneasy from the loss of a queen, with the result that I have always found them safe and sound.

FRANK S. DEGROFF.

St. Lawrence Co., N. Y., Dec. 29.

The Blight Question—Sowing for Bees.

In Prof. Cook's article, page 22, he strikes the nail on the head (as he usually does), when he says: "All must combine, and all will combine, as ever the right comes uppermost, and ever is justice done." I am strictly a lay member, but would be pleased to be kept in the straight and narrow path.

While not agreeing with the California fellows on the blight question, and while not ad-



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Our SPLIT HICKORY SPECIAL at \$47.50

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Choice kinds of Vegetable and Flower Seeds at 2 cents per Packet. Flower Plants, 5 cents each. Many choice novelties. Don't buy until you see our *New Catalogue*. Mailed **FREE** if you mention this paper.

IOWA SEED CO., DES MOINES, IOWA.

\$5 TO START YOU IN BUSINESS

We will present you with the first \$5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.

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HIVES, SMOKERS, EXTRACTORS, FOUNDATION

.....AND ALL.....

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We want 1000 subscribers among the readers of the American Bee Journal.

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\$1.50

All for 50 cents.

"The Horticultural Visitor" is among the best of the fruit-papers published.
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Gleanings, The Modern Farmer, and either of the above—one year—\$1.00.

This ad. will not appear again. Do it quick, if you want a bargain. Address,

THE MODERN FARMER, St. Joseph, Mo.



A FRIEND to poultrymen—to chickens.

Adam's GREEN BONE CUTTER

It runs easily because it has ball bearings. It cuts clean, quickly and perfectly. Makes a fine bone shaving such as chickens require. Before you buy send for free catalogue No. 9.

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DRAPER PUBLISHING CO., Chicago, Ills.

Field-Note.—All farmers and everyone who has a garden will be interested in the new catalog just issued by the Iowa Seed Co., of Des Moines, Iowa. It is the largest and most complete book of this kind ever published by any seed-firm west of the Mississippi, which, as our readers are doubtless aware, is the great seed-growing section of the United States. This firm claims now to stand first in their line among Twenty Million people, and they make a specialty of supplying the best quality of Seed Corn and other farm and garden seeds direct from the grower to the user. Catalog will be mailed free on request. Please mention the American Bee Journal when writing.

Queen-Clipping Device Free!



The **MONETTE** Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us **One New** subscriber to the Bee Journal for a year at \$1.00; or for \$1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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Tip-Top Glass Honey-Jars



The picture shown herewith represents the best one-pound jar for honey that we know of. It is made of the clearest flint glass, and when filled with honey, and a neat label attached, it makes as handsome a package as can be imagined. Its glass top sets on a flat rubber ring, and is held in place by a flat steel spring across the top as shown in the picture. It is practically air-tight, thus permitting no leak,

which is an important thing with honey-sellers.

We can furnish these jars, f.o.b. Chicago, at these prices: One gross, \$5.00; two gross, \$4.75 a gross; five or more gross \$4.50 per gross.

If you try them once you will likely use no other kind of top or sealing arrangement for honey jars.

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wants to sell you your Supplies. Send for their Catalog and Price-List of BEE-KEEPERS' SUPPLIES, free. Best goods for best prices. Address,

THE WHITE MFG. CO.

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"Bees in Colorado"

I still have several hundred copies of the souvenir with the above title. The bee-papers and a good many people without visible axes to grind have said it is a valuable and attractive thing. If you should like to have a copy, send me a silver dime or 5 two-cent stamps, and I will mail you a copy.

"BEES IN COLORADO" is the title of a 48-page and cover pamphlet gotten up to boom the Denver convention. Its author is D. W. Working, the alert secretary of the Colorado State Bee-Keepers' Association. It is beautifully illustrated, and printed on enameled paper. It is a credit to Mr. Working, and will be a great help in acquainting those outside of Colorado with the bee and honey characteristics and opportunities of that State.—American Bee Journal.

D. W. WORKING, Box 432, Denver, Colo.

Please mention Bee Journal when writing.

vancing any cure for blight, I once happened to live one summer where there were no bees, but in a district where nearly everything in fruit line blighted, especially in the varieties of pear and apple, and it was all kinds, too—tree, limb and twig, also fruit-blight—and it was impossible for it to have been done by inoculation by bees or insects, especially the twig and fruit, as one day they were all green, thrifty and growing, the next day blighted, shriveled and brown by evening. The people called it "electric blight," claiming there was no blight there until the telegraph and telephone lines were stretched through their district.

As I feel a little critical, I noticed another article by J. E. Johnson, of Knox Co., Ill., who claims he has an orchard of 900 trees and no blight. Now, whether that is not a smooth way of securing an "ad," I am not sure, as after the assertion he leaves the subject. I would prefer that he would get the affidavits of some disinterested neighbors to that effect, and then give us the formula or peculiar method of cultivation, i.e., if he wishes to be a great public benefactor. The seed-sowing part of his article is all right, provided there is waste or uncultivated lands to scatter seeds on, but when we use good, tillable land for raising bee-pasture only, I am afraid it will hardly pay, while all kinds of blooming crops give two dividends. I find that turnip is a fine honey-plant, blooms at a season just after fruit-bloom, and the bees literally cover it from morning till dewy eve. If florists in their "ads" and circulars would always say whether or not certain flowers were honey-secreting, they would secure many sales from apiarists that at present they do not.

There are the "Sisters" that call a fellow an "Old Drone." Not being a bachelor, this probably is admissible, but suppose a fellow is not "old," and more, if there is another insect that really deserves sympathy more than the drone-bee, I am not acquainted with it. In the first place, Mr. Drone-Bee is fed on the fat of the land, groomed and kept sleek, not allowed to wait on himself, hovers the brood in cool nights and after a time of elegant leisure is pounced upon and ruthlessly driven from his own home to starve. Just think of it!

W. S. MITCHELL.

Cherokee Nation, Ind. Ter.

Feeding Bees—Dividing or Shaking.

I thought I might write how I fed the bees 200 pounds of sugar. I fixed up some feeders with floaters in them that gave me far better results than the Miller feeder.

I keep the mice out of my cellar by the use of poison and traps.

I have practiced dividing my bees for 15 years; I suppose every large bee-keeper does this. I always run out-aparies by the shaken or dividing plan.

I took all the honey from my bees last fall and fed sugar syrup. I have sold nearly all my comb honey, for the last two years, as chunk honey, cut it up and put it in Mason jars, and then filled up with extracted honey. I find ready sale for this kind of a package. I found a way to keep the honey from granulating in the jar. Put in just a little tartaric acid. I do not see that it hurts the honey. What do you think?

C. J. BARBER.

Monona Co., Iowa.

New and Old Things in Beedom.

When will there cease to be something new in the bee-keeping line? I've been puzzling my brain over that fellow, who came over from Canada, "by letter," to have a talk with Mr. Doolittle. How that could be done, "by letter," and have the questions and answers in such consecutive order, and have them so interwoven together—first one asking a question and then the other; and each answering the other's question—is more than I can get through my stupid noodle. If a 'phone were used, it is easy to understand it; or, if wireless telegraphy were brought into requisition we might comprehend it; but the other thing beats me. It is worse than the 13-14-15 puzzle. I give it up.

Not only something new, but old things—matters we might suppose were buried out of sight—bob up, like Banquo's ghost, to annoy

us, and get us "all by the ears" again. Now, it's the color of what we wear in the bee-yard. I'll be careful to "sing low," for I don't want any hair-pulling—have but a few stray locks left, and prize them highly. Have always worn black—or nearly always—but not of the rough, woolly texture. Usually have a pair of black-silk stocking legs drawn over my shirt-sleeves, to keep them from being soiled as I work in the hive. Never have experienced any inconvenience on account of annoyance of the bees by so doing. Perhaps my bees were better-natured than some others. Often roll up my sleeves to my elbows, go down to the very bottom of the hive of a strong colony without a sting; never wear gloves.

Have seen bees alight all over a person wearing light-colored fuzzy garments, but when exchanged for something smooth, it seemed to take all the fight out of them. You know, a cross bee will make a bee-line for one's eyes if she can get there, but if the eyes are protected, will get as near as she can. How she will buzz around, peeping through your veil from side to side, hoping to find a place to dart through!

There is a reflection of light from the eye, as we always see in the photograph. The bees are attracted by it; or they seem to know that there is the vulnerable point for attack. The head of the "hat-pin," which has been recently referred to, has just such a point of reflection, seen from any point of view, and becomes an attractive object for investigation. I think it would make no difference whether the head of the pin was white or black, red, green or blue. Wearing this hat-pin is a new idea. Think I'll stick a couple or so in the top of my old bee-hat for the bees to play with.

There is another thing that has attracted my attention not a little since commencing the study of the honey-bee, and that is a kind of miller, differing materially from the moth-miller which we often see infesting the hive of bees. Hear of them occasionally as being among colonies of bees and comb honey, but in all my experience, have never found so many as this year. Have found more than I ever saw in any old box-hive of black bees. They seem to do no particular harm. Who can give us any light on the subject?

Walworth Co., Wis. Wm. M. WHITNEY.

CONVENTION NOTICES.

Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet Feb. 4 and 5, in Madison, Wis. Special program prepared. Excursion railroad rates and special hotel rates secured. N. E. FRANCE, Pres.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.
CHAS. B. ALLEN, Sec.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 3 and 4, 1903, in the Council Rooms of the City Hall, at Lansing. The rooms are in the third story, back away from the noise of the street, yet they can be reached by the elevator.

Arrangements have been made at a nice, clean hotel, the Wentworth House, only two blocks from the place of meeting, where bee-keepers will be accommodated at \$1.50 a day.

The Michigan State Dairymen will hold their convention at the Agricultural College, Lansing, on the same dates, as also will the State Veterinarians, thus enabling the members of all three societies to come at reduced rates. When buying your ticket you will pay full fare, and ask for a certificate "on account of Michigan Dairymen's Convention," as the secretary of this convention is to sign the certificates for all three of the conventions. This certificate will enable you to go back at one-third fare.

The first session will be on the evening of the 3rd, when E. R. Root will show us "Bee-Keeping from the Atlantic to the Pacific, as seen through the Camera and Stereopticon." This will consist of portraits of distinguished beekeepers, of apiaries, hives, implements, methods, etc., all fully explained. A more enjoya-

ble entertainment for a bee-keeper can not be imagined.

Mr. C. A. Huff, who has been experimenting the past season with formalin for curing foul brood, has promised to be present. Messrs. Soper and Aspinwall are not far away, and will probably be present. Mr. Aspinwall has kept about 70 colonies for the past 10 years, without losing a colony in winter. He can tell us how he has prevented this loss; also how he prevents swarming. Mr. T. F. Bingham, who has been so successful wintering bees in a cellar built like a cistern, is also expected. Messrs. A. D. D. Wood and J. H. Larrabee will help to make the meeting a success.

This is the first time that the convention has been held in the Southern part of the State in several years; let us turn out and show our appreciation of the event.

W. Z. HUTCHINSON, Pres.

1-lb Keystone ... Honey-Jars

These are clear flint glass jars holding just one pound, and the shape of a keystone. They are 7½ inches high, and very pretty when filled with honey. The corks can be sunk a trifle below the top, and then fill in with beeswax, sealingwax or paraffin. We can furnish them in single gross lots, with corks, f.o.b. Chicago, at \$3.50; two gross, \$3.25 per gross; or five or more gross, at \$3.00 a gross. These are the cheapest glass one-pound jars we know anything about. We have only a few gross of them left. So speak quick if you want them. Address,

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The Greider Strains,

fifty of them, are bred to make prize winners. Very low prices on birds and eggs, considering quality. Elegant 1903 catalogue sent postpaid for 10 cents. Write to-day.

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2000 lbs. Basswood Extracted honey, at 9c a pound. All in 60-lb. cans. Warranted PURE HONEY. JOHN WAGNER, BUENA VISTA, ILL.
5Atf Please mention the Bee Journal.

Prevent Honey Candying

Sent free to all.
HENRY ALLEY, Wenham, Mass.
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"What Happened to Ted"

BY ISABELLE HORTON.

This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x8½ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,

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The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Jan. 9.—The demand is not more than usual; hence stocks are sufficient, especially as Cuba has now comb honey on this market. This is a new source of supply, and is a factor that must be reckoned with, as it obviates the necessity of laying in a stock during the summer and autumn to draw from in the winter and spring months. The best grades of white comb sell at 15@16c per pound, with travel-stained and light amber, 13@14c; darker grades, 10@12. Extracted, 7@8c for white, and 6@7c for ambers. Beeswax steady at 30c.
R. A. BURNETT & Co.

ALBANY, N. Y., Jan. 7.—Honey demand and receipts light. We quote white comb, 15 cents; mixed, 14c; buckwheat, 13@14c. Extracted, white, 7@7½c; dark and buckwheat, 7@7½c. More demand for buckwheat than any other here.
H. R. WRIGHT.

KANSAS CITY, Dec. 20.—Market steady at quotations. We quote fancy white comb, per case, 24 sections, \$3.50; No. 1 at \$3.40; No. 2 white and amber, \$3.25. Extracted, white, per pound, 7@7½c; amber, 6@6½c. Beeswax, 27@30c.
C. C. CLEMONS & Co.

CINCINNATI, Jan. 7.—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5½@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 29@30c.
THE FRED W. MUTH CO.

NEW YORK, Dec. 23.—The market on comb honey is dull and inactive. While the supply is not large the demand has fallen off to a large extent and prices show a weakening tendency. We quote fancy white at 15c; No. 1, 14c; No. 2, 13c; and buckwheat at from 10@12c. Extracted is in fairly good demand; white, 7½c; light amber, 6½@7c; dark, 5½@6c. Beeswax firm at from 28@29c.
HILDRETH & SHOELKEN.

CINCINNATI, Jan. 20.—The demand for comb honey has fallen off, which in general happens right after the holidays, although prices rule as before: White clover, 15½c; extra fancy water-white, 16c; no demand for lower grades. Extracted honey is in fair demand, and sells as follows: Amber, in barrels, 5½@5¾c; in cans, 6c; alfalfa, 7½c; white clover, 7½@8½c. Beeswax, 28@30c.
C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5½c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5½@6c per pound at primary prices, subject to a \$1.10 freight-rate to the East.

WANTED WHITE CLOVER EXTRACTED HONEY!

Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

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Hives, Sections, Foundation,

etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.

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25Atf T. F. BINGHAM, Farwell, Mich.
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and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

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ANOTHER CARLOAD
OF THAT FINE**White Alfalfa Honey**

ALL IN 60-LB. CANS



A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 1 box of 2 cans (120 lbs.) at 8½c a pound; 2 boxes or more (4 or more cans), at 8c a pound. We can furnish Basswood Honey at ½c a pound more. (These prices are for selling again).

This Alfalfa Honey should go off like hot-cakes. Better order at once, and get a good supply for your customers.

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Root's Extractors.

It's a fact that **Roots Cowan Honey-Extractors** are acknowledged by far the best extractors on the market. You will make a mistake if you take one represented to be "just as good." Our designs are the best, we use the best material, and our workmanship is unsurpassed. Insist on Root's Cowan.

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It is a "Fact" that the **Danzenbaker Hive** for Comb Honey, is acknowledged by all who have given it a fair trial the best hive for comb honey.

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It is a fact that bee-keepers using the Danz. hive get better yields from this hive than any other hives in their yards.

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It is also a fact that the honey in Danz. Sections generally sells for a higher price, and always finds a ready market. We have yet to learn of a bee-keeper having comb honey in Danz. sections who had to hold his honey because of a dull market.

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